

Amendments to the Specification

1. Please amend page 25, lines 20-27 of the original specification as follows:

3A – Comparison of R7 homopolymer with single amino acid spacing (no side chains)

A series of arginine containing conjugates was prepared as described in Example 1 and evaluated as described in Example 2. Spacing between seven arginine residues was provided by glycine (see Seq. I.D. No. [____] 4), γ -aminobutyric acid (see Seq. I.D. No. [____] 5), and ϵ -aminocaproic acid (see Seq. I.D. No. [____] 6). Figure 1 shows the results of cellular uptake for the “spaced” arginine transport moieties when tethered to fluorescein. As can be seen from this figure, cellular uptake generally increases when spacing increases (ϵ -aminocaproic acid > γ -aminobutyric acid > glycine).

2. Please amend page 25, line 29 - page 26, line 15 of the original specification as follows:

3B--Comparison of R7 Homopolymer with Naturally-Occurring Single Amino Acid Spacing

A series of arginine containing conjugates was prepared as described in Example 1 and evaluated as described in Example 2. Spacing between seven arginine residues was provided by naturally occurring (gene-encoded) amino acids (see Seq. I.D. Nos. [____] 7 to [____] 22). Figure 2 shows the results of cellular uptake for these “spaced” arginine transport moieties when tethered to fluorescein. As can be seen from this figure, an increase in cellular uptake was found (relative to the homopolymer R7 having no “spacing”) for those compositions containing the amino acids Alanine, Phenylalanine, Glycine, Histidine, Isoleucine, Lysine, Methionine, Asparagine, Proline, Glutamine, Serine, Threonine and Valine. Reduced, or comparable uptake was seen with those compositions containing Aspartic acid, Glutamic acid, and Tyrosine. Without intending to be bound by theory, it is thought that the carboxylic acid residues (for Asp and Glu) and the phenolic hydroxy group of Tyr may cancel or coordinate with the positively charged Arginine residue and lead to a reduction in the number of positively charged Arginines that are available to provide enhanced penetration into the cell. Figures 3 and 4 illustrate the same general results

at different concentrations indicating that these results are essentially independent of concentration. At the lower concentration of 6.25 μ M, the uptake of Fl-aca-R7-CONH₂ begins to drop off relative to the spaced arginine transport moieties.